UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF COMMERCIAL FISHERIES

CALIFORNIA FISHERY MARKET NEWS MONTHLY SUMMARY

JANUARY 1969

PART II–Fishing Information*

Sea-surface temperatures, fishing and research information of interest to the West Coast tuna-fishing industry and marine scientists

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SEA SURFACE TEMPERATURE CHARTS, EASTERN PACIFIC OCEAN
JANUARY 1969

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Charts

Figure 1.--Mean sea surface temperatures (°F) derived from approximately 8000 observations. Squares show temperatures at weather ship stations. Numerals on shore are temperatures at coastal and lightship stations.

Figure 2.--Deviation of sea surface temperatures (°F) from long term charts of H.O. 225. Hatched areas are colder in 1969.

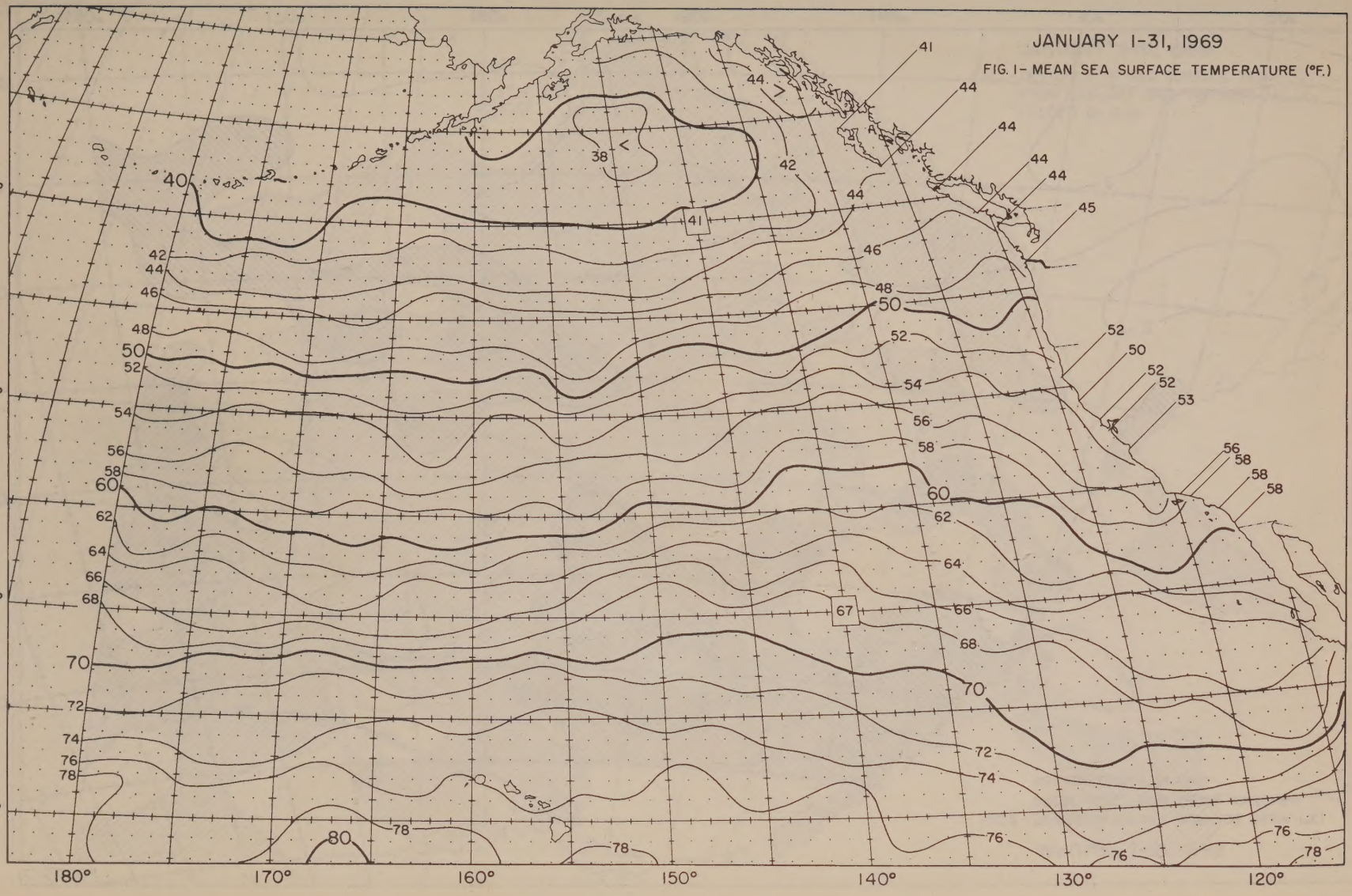
Figure 3.--Deviation of sea surface temperatures (°F) from those of January 1968. Hatched areas are colder in 1969.

Figure 4.--Sea surface temperatures (°F) by 1-degree squares, approximately 2000 observations. Line under temperatures indicates average of two or more observations. Numerals on shore are temperatures at coastal stations.

Figure 5.--Deviation of sea surface temperatures (°F) January 1969-January 1968 by 1-degree squares. Shaded areas are colder in 1969.

Figure 6.--Deviation of sea surface temperatures (°F) from 12-year mean (1947-1958) by 2-degree squares. Shaded areas are colder in 1969.

James A. Renner, Fishery Biologist
Kenneth S. Raymond, Scientific Illustrator
February 7, 1969


JANUARY 1-31, 1969
FIG. 1- MEAN SEA SURFACE TEMPERATURE (°F.)
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
41
44
44
44
44
44
45
38
42
44
40
41
42
44
46
48
50
52
46
48
50
52
54
56
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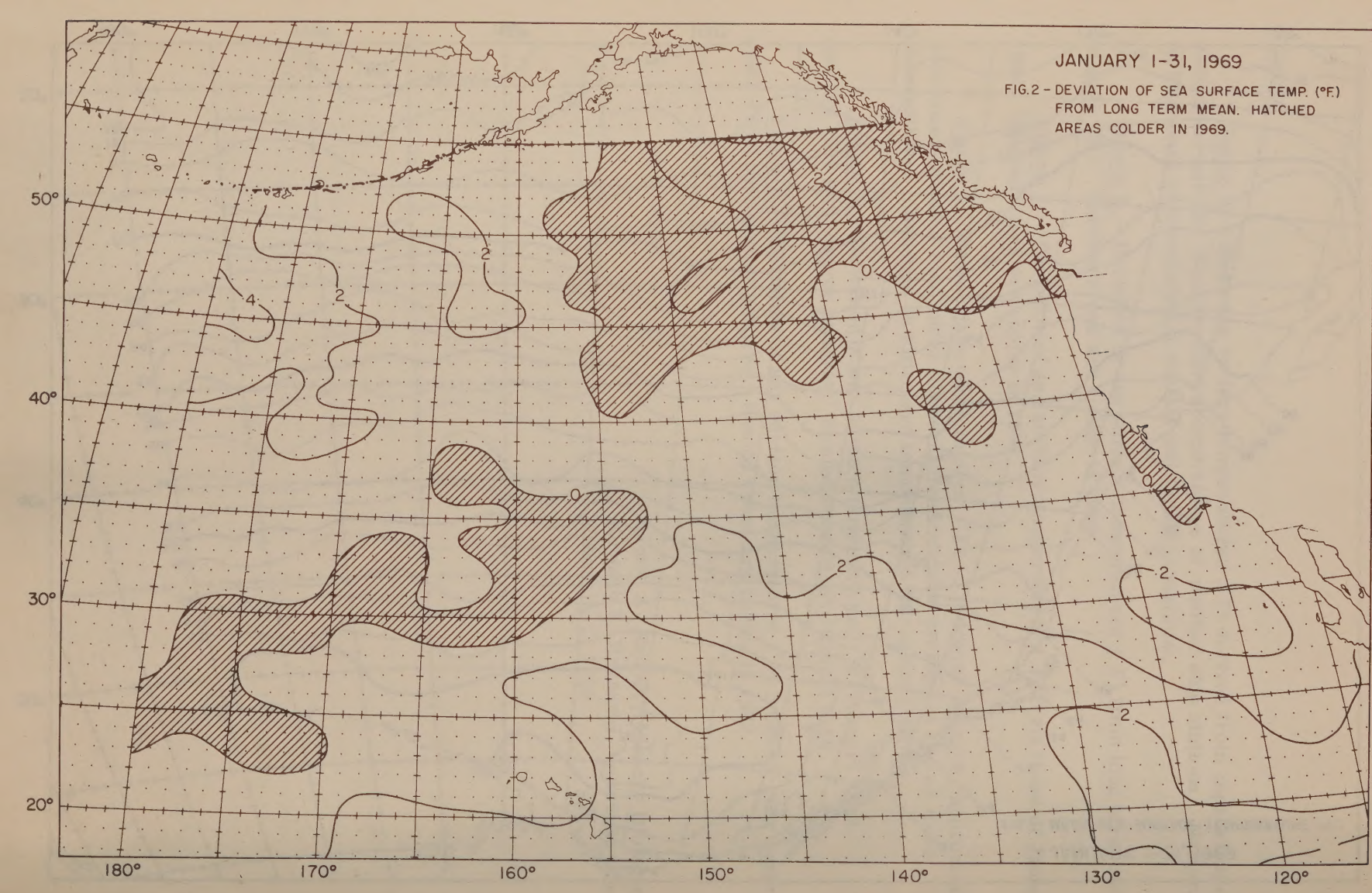
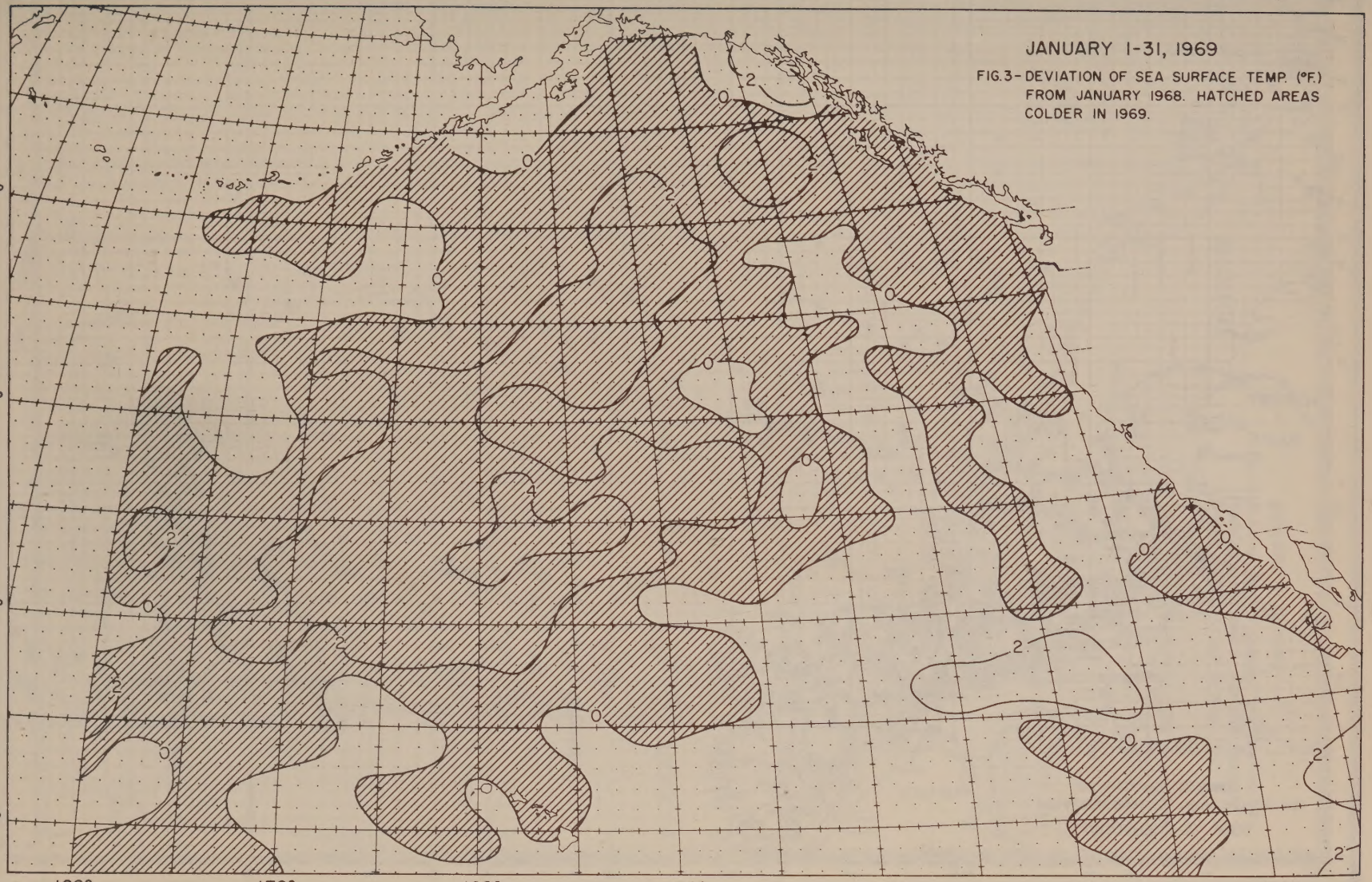
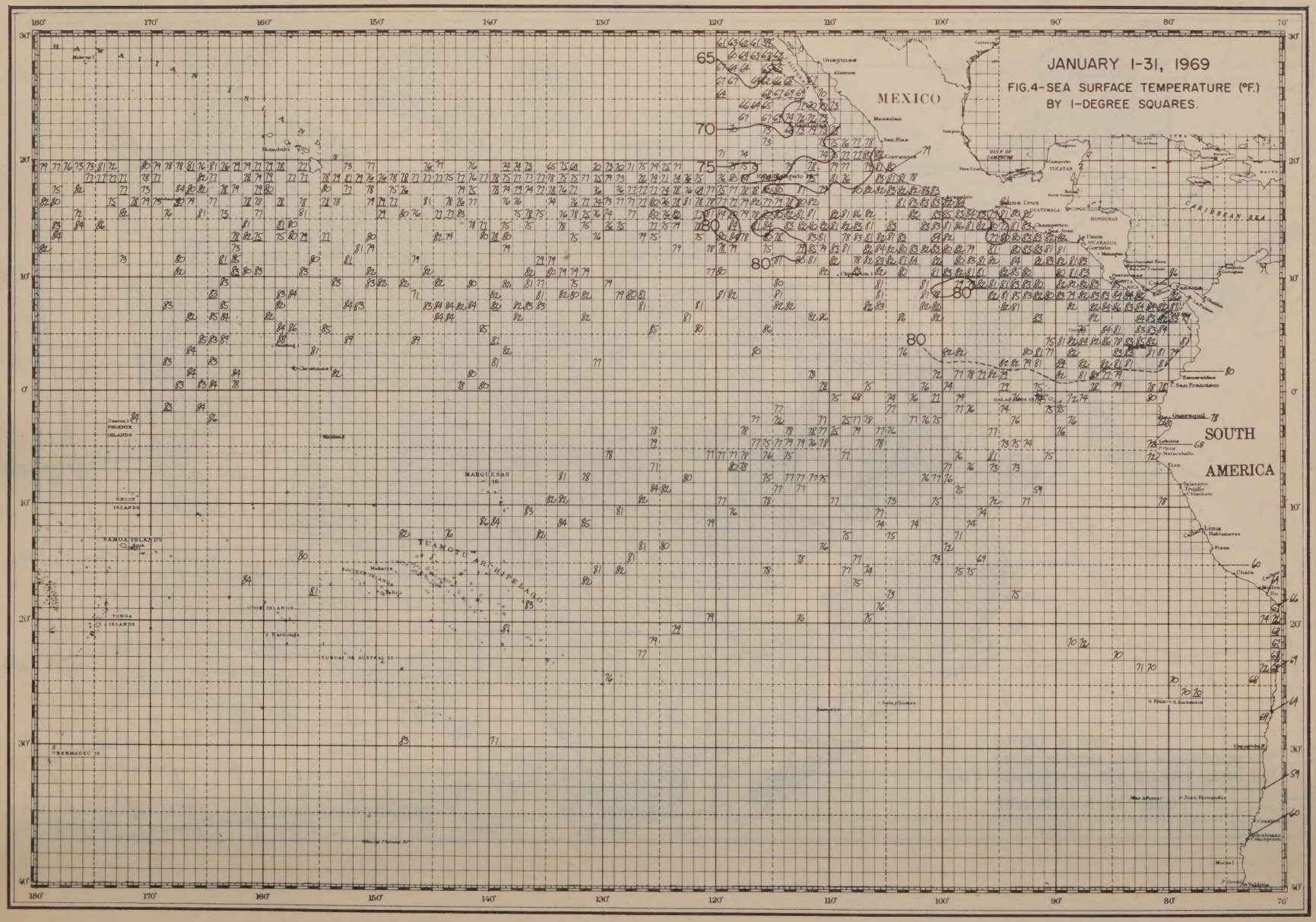
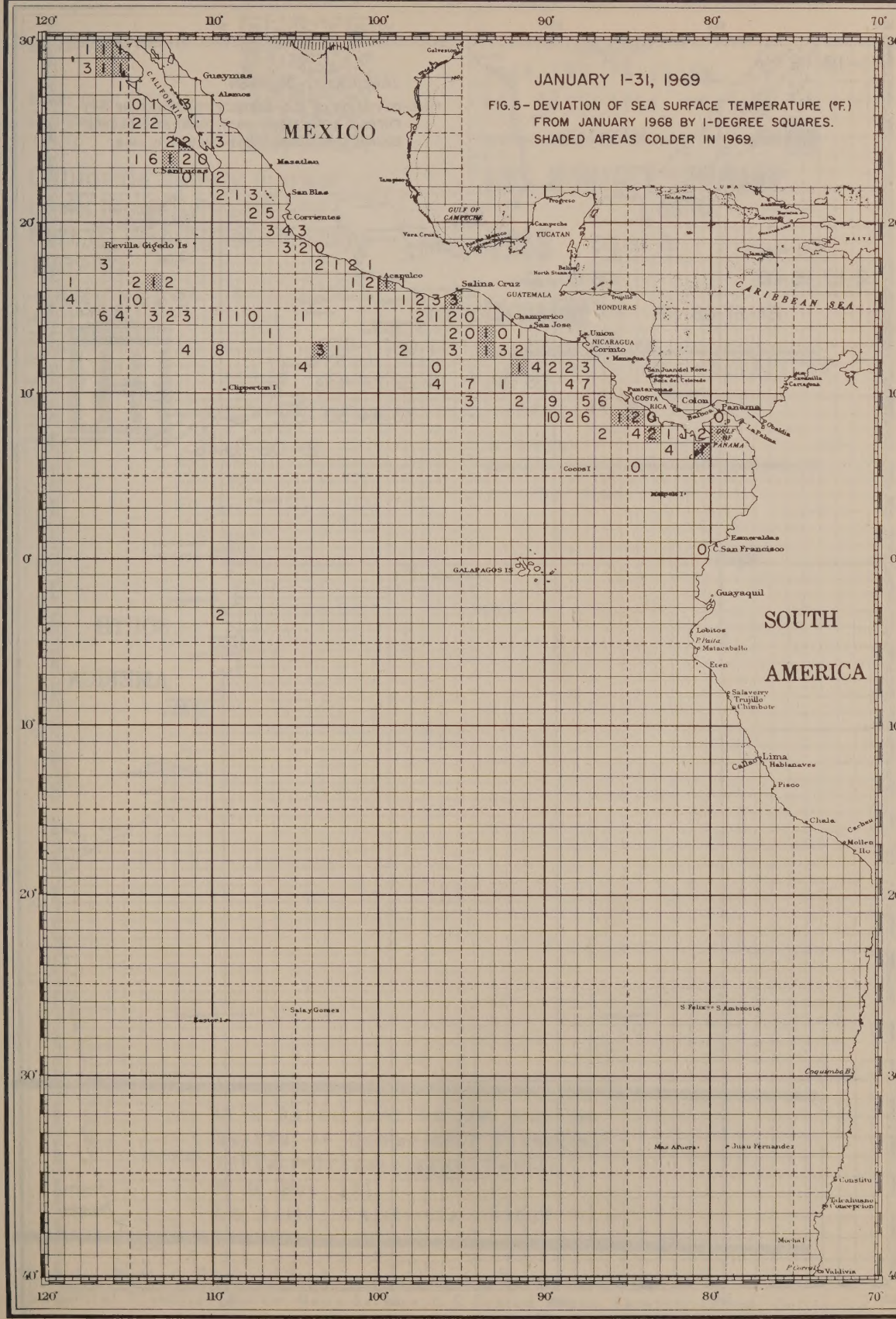
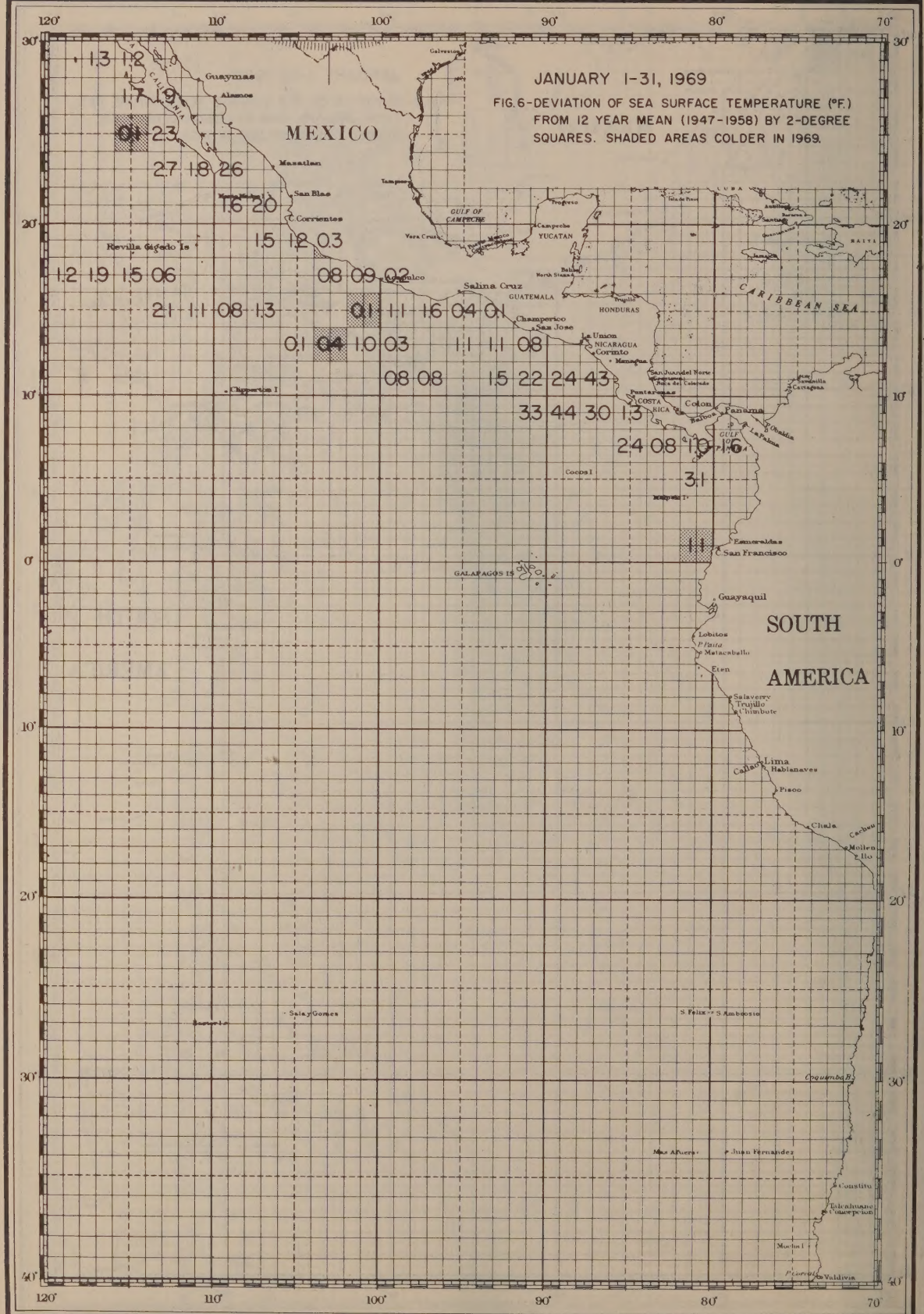

JANUARY 1-31, 1969
FIG. 2 - DEVIATION OF SEA SURFACE TEMP. (°F.) FROM LONG TERM MEAN. HATCHED AREAS COLDER IN 1969.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
4
2
2
2
0
0
0
2
2
2
0


JANUARY 1-31, 1969
FIG.3- DEVIATION OF SEA SURFACE TEMP. (°F.) FROM JANUARY 1968. HATCHED AREAS COLDER IN 1969.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°


JANUARY 1-31, 1969
FIG.4-SEA SURFACE TEMPERATURE (°F.)
BY 1-DEGREE SQUARES.
MEXICO
SOUTH
AMERICA
CARIBBEAN SEA
HAWAIIAN ISLANDS
PHOENIX ISLANDS
LINE ISLANDS
MARQUESAS IS.
SAMOA ISLANDS
TUAMOTU ARCHIPELAGO
COOK ISLANDS
TONGA ISLANDS
KERMADEC IS.
GALAPAGOS IS.
Guaymas
Mazatlan
San Blas
Acapulco
Salina Cruz
GUATEMALA
HONDURAS
NICARAGUA
Corinto
Champerico
Manzanillo
Guayaquil
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Arica
Iquique
Antofagasta
Coquimbo
Valparaiso
Talcahuano
Concepción
Mocha I.
Juan Fernandez
Mas Afuera
Easter I.
Honolulu
Christmas I.
Palmyra I.
Fanning I.
Tahiti
Rapa
Tubuai or Austral Is.
Raivavae
Rurutu
Rimatara
Rarotonga
Aitutaki
Manihiki
Penrhyn I.
Nassau I.
Suwarrow I.
Samoa
Tutuila
Apia
Swains I.
Jarvis I.
Malden I.
Starbuck I.
Canton I.
Enderbury I.
Howland I.
Baker I.
Gardner I.
Necker I.
Nihoa
Kauai
Oahu
Molokai
Maui
Hawaii
Kilauea
Mauna Loa
Mauna Kea
Hilo
Kona
Kahului
Lahaina
Honolulu
Pearl Harbor
Waikiki
Diamond Head
Kaneohe
Wahiawa
Schofield Barracks
Wheeler Field
Hickam Field
Ewa
Waianae
Kaena Point
Barbers Point
Ford Island
Makapuu Point
Koko Head
Koko Crater
Punchbowl
Aiea
Pearl City
Waipahu
Waialua
Haleiwa
Waimea
Kekaha
Niihau
Kaula
Lehua
Kaiwi Channel
Molokai Channel
Alenuihaha Channel
Auau Channel
Kauai Channel
Maalaea Bay
Kaneohe Bay
Honolulu Harbor
Pearl Harbor
Waikiki Beach
Diamond Head


JANUARY 1-31, 1969
FIG. 5 - DEVIATION OF SEA SURFACE TEMPERATURE (°F.) FROM JANUARY 1968 BY 1-DEGREE SQUARES. SHADED AREAS COLDER IN 1969.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GULF OF CALIFORNIA
GULF OF MEXICO
GULF OF CAMPECHE
GULF OF PANAMA
GUATEMALA
HONDURAS
NICARAGUA
COSTA RICA
CUBA
HAITI
YUCATAN
GALAPAGOS IS
Guaymas
Alamos
Mazatlan
San Blas
C. Corrientes
Acapulco
Salina Cruz
Champerico
San Jose
La Union
Corinto
Managua
Panama
Colon
Esmeraldas
San Francisco
Guayaquil
Lobitos
Eten
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Mollendo
Arica
Iquique
Antofagasta
Coquimbo
Valparaiso
Constitucion
Talcahuano
Concepcion
Valdivia
Galveston
Tampico
Vera Cruz
Progreso
Campeche
Belize
Trujillo
Kingston
Santiago
Guantanamo
Cartagena
Puntarenas
Balboa
Cocos I
Chippertons I
Revilla Gigedo Is
Sala y Gomez
S. Felix
S. Ambrosio
Juan Fernandez
Mas Afuera
Mocha I


JANUARY 1-31, 1969
FIG. 6-DEVIATION OF SEA SURFACE TEMPERATURE (°F.) FROM 12 YEAR MEAN (1947-1958) BY 2-DEGREE SQUARES. SHADED AREAS COLDER IN 1969.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GULF OF CAMPECHE
GULF OF CALIFORNIA
GUATEMALA
HONDURAS
NICARAGUA
COSTA RICA
YUCATAN
HAITI
CUBA
GALAPAGOS IS
Guaymas
Alamos
Mazatlan
San Blas
Corrientes
Revilla Gigedo Is
Acapulco
Salina Cruz
Champerico
San Jose
La Union
Corinto
Managua
Chiperton I
Cocos I
Panama
Colon
Balboa
Puntarenas
Esmeraldas
San Francisco
Guayaquil
Lobitos
Pta Mata caballo
Eten
Salaverry
Trujillo
Chimbote
Callao
Lima
Habianaves
Pisco
Chala
Cachau
Mollendo
Ilo
Sala y Gomez
S. Felix
S. Ambrosio
Coquimbo
Mas Afuera
Juan Fernandez
Constitu
Talcahuano
Concepcion
Mocha I
Valdivia
1.3 1.2
1.7 1.9
0.1 2.3
2.7 1.8 2.6
1.6 2.0
1.5 1.2 0.3
1.2 1.9 1.5 0.6
0.8 0.9 0.2
2.1 1.1 0.8 1.3
0.1 1.1 1.6 0.4 0.1
0.1 0.4 1.0 0.3
1.1 1.1 0.8
0.8 0.8
1.5 2.2 2.4 4.3
3.3 4.4 3.0 1.3
2.4 0.8 1.0 1.6
3.1
1.1